

Name: _____

Teacher: _____

Algebra Pd: _____

**HW 3.6: All Exponent
Rules incl. Division**

Day Month Year

Part One: Simplify each expression as completely as possible. Do not leave powers of one or zero, or negative indices, or coefficients of one. Be sure to combine all like terms.

1. $(3x^3y^8)^5$	2. $(5x^8y^2)^3$
3. $\frac{x^5y^3}{x^8y}$	4. $(-9x)(2x^5)^2$
5. $\frac{5a^4b^6c^{10}}{10a^2b^3c^5}$	6. $(-a^3b^8)^0(a^4b^{-5})^{-4}$
7. $\frac{a^3b^8c^{-10}}{a^5b^3c^{12}}$	8. $(2x^5y^4)^2 + 5xy(3x^9y^7)$

Part Two: Please answer each question using complete sentences and algebraic terms. Be sure to ECHO the prompt. The reader should be able to know what the original question was just by reading your answer!

9. Please explain the division property of exponents. Use a specific example to help your explanation.

10. Barry states that x to the index of seven divided by x to the index of three is equal to x to the index of negative four. Is Barry correct? Explain your reasoning.
